WHAT IS CLAIMED IS:

1. A bipolar transistor comprising:

a semiconducting substrate:

a first impurity diffusion layer having a first conducting type, which is formed in said semiconducting substrate;

a first conductive film connected to said first impurity diffusion layer;

an opening portion formed in said first conductive layer;

a second impurity diffusion layer having the first conducting type, which is formed at least in a portion, exposed from said opening portion, of said semiconducting substrate in such a manner as to be connected to said first impurity diffusion layer;

a third impurity diffusion layer having the first conducting type, which is formed in said semiconducting substrate in such a manner as to contain said second impurity diffusion layer, said second impurity diffusion layer having a surface impurity concentration equal to or more than that of said third impurity diffusion layer;

side walls formed of an insulating film in said opening portion; and

a fourth impurity diffusion layer having a second conducting type, which is formed at least in a portion, exposed from said opening portion surrounded by said side walls, of said semiconducting substrate and in said third impurity diffusion layer, said second impurity diffusion layer having a diffusion depth equal to or less than that of said fourth impurity diffusion layer.

2. A bipolar transistor according to claim 1, wherein said first impurity diffusion layer is a base contact; said third impurity diffusion layer is a base; said second impurity diffusion layer is a link-up layer for linking said base contact to said base; and said fourth impurity diffusion layer is an emitter.

3. A bipolar transistor comprising:

a semiconducting substrate:

a first impurity diffusion layer having a first conducting type, which is formed in said semiconducting substrate;

a first conductive film connected to said first impurity diffusion layer;

an opening portion formed in said first conductive layer;

a second impurity diffusion layer having the first conducting type, which is formed at least in a portion,

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exposed from said opening portion, of said semiconducting substrate in such a manner as to be connected to said first impurity diffusion layer;

a third impurity diffusion layer having the first conducting type, which is formed in said semiconducting substrate in such a manner as to contain said second impurity diffusion layer;

side walls formed of an insulating film in said opening portion;

a fourth impurity diffusion layer having a second conducting type, which is formed at least in a portion, exposed from said opening portion surrounded by said side walls, of said semiconducting substrate and in said third impurity diffusion layer; and

a fifth impurity diffusion layer having the second conducting type, which is formed directly under said second impurity diffusion layer, said fifth impurity diffusion layer having a diffusion depth in the maximum concentration from the substrate surface deeper than that of said third impurity diffusion layer.

4. A bipolar transistor according to claim 3, wherein said first impurity diffusion layer is a base contact; said third impurity diffusion layer is a base; said second impurity diffusion layer is a link-up layer for linking

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said base contact to said base; said fourth impurity diffusion layer is an emitter; and said fifth impurity diffusion layer is a layer for reducing the concentration of the bottom of said base and/or part of a collector.

5. A bipolar transistor comprising:

a semiconducting substrate:

a first impurity diffusion layer having a first conducting type, which is formed in said semiconducting substrate;

a first conductive film connected to said first impurity diffusion layer;

an opening portion formed in said first conductive layer;

a second impurity diffusion layer having the first conducting type, which is formed at least in a portion, exposed from said opening portion, of said semiconducting substrate in such a manner as to be connected to said first impurity diffusion layer;

a third impurity diffusion layer having the first conducting type, which is formed in said semiconducting substrate in such a manner as to contain said second impurity diffusion layer, said second impurity diffusion layer having a surface impurity concentration equal to or more than that of said third impurity diffusion layer;

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side walls formed of an insulating film in said opening portion;

a fourth impurity diffusion layer having a second conducting type, which is formed at least in a portion, exposed from said opening portion surrounded by said side walls, of said semiconducting substrate and in said third impurity diffusion layer, said second impurity diffusion layer having a diffusion depth equal to or less than that of said fourth impurity diffusion layer; and

a fifth impurity diffusion layer having the second conducting type, which is formed directly under said second impurity diffusion layer, said fifth impurity diffusion layer having a diffusion depth in the maximum concentration from the substrate surface deeper than that of said third impurity diffusion layer.

6. A bipolar transistor according to claim 5, wherein said first impurity diffusion layer is a base contact; said third impurity diffusion layer is a base; said second impurity diffusion layer is a link-up layer for linking said base contact to said base; said fourth impurity diffusion layer is an emitter; and said fifth impurity diffusion layer is a layer for reducing the concentration of the bottom of said base and/or part of a collector.

7. A method of fabricating a bipolar transistor

comprising the steps of:

forming on a semiconducting substrate a first insulating film having a pattern in which the surface of said semiconducting substrate is partially exposed from said first insulating film;

sequentially forming a first conductive film and a second insulating film over the surface of said semiconducting substrate formed with said first insulating film, and then forming an opening portion so as to expose the surface of said semiconducting substrate;

forming a third insulating film on said opening portion and said first conductive film;

forming a first impurity diffusion layer having a first conducting type by applying ion implantation to said semiconducting substrate at a first energy through said third insulating film;

forming a second impurity diffusion layer having the first conducting type by applying ion implantation to said semiconducting substrate at a second energy;

forming a third impurity diffusion layer having the first conducting type in said semiconducting substrate connected to said first conductive layer;

forming side walls made of a fourth insulating layer on side walls of said opening portion of said

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semiconducting substrate in which said first, second and third impurity diffusion are formed;

forming a second conductive film in said opening portion so as to be connected to said first impurity diffusion layer; and

forming a fourth impurity diffusion layer having a second conducting type in said second impurity diffusion layer by ion implantation applied through said second conductive layer.

8. A method of fabricating a bipolar transistor according to claim 7, wherein said second impurity diffusion layer is formed by ion implantation at said second energy, and thereafter a fifth impurity diffusion layer is formed under said first impurity diffusion layer by ion implantation at a third energy.

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9. A bipolar transistor according to claim 7, wherein said first energy is lower than said second energy.

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